



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,155	03/08/2006	Csaba Bona	CSBO0101PUSA	3472
22045	7590	08/07/2009		
BROOKS KUSHMAN P.C. 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075				
EXAMINER				
DECKER, CASSANDRA L				
ART UNIT		PAPER NUMBER		
2419				
MAIL DATE		DELIVERY MODE		
08/07/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/595,155

Applicant(s)

BONA, CSABA

Examiner

CASSANDRA DECKER

Art Unit

2419

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Detailed Action

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 24 June 2009 has been entered.

Claim Objections

2. Claims 1, 2, 11, and 12 are objected to because of the following informalities. Appropriate correction is required.

In claims 1, 2, 11, and 12, "the data" should be corrected to ---the electronic data---in order for a clear reflection of the antecedent basis of "electronic data".

Claim Rejections – 35 USC 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-10 and 12-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claims 1 and 12, "combining every N-th bit into one type of the N types of packets" does not clearly indicate that every N-th bit is being combined into a respective one type of the N types of packets, e.g. all the bits could go into the same one type of the N types of packets. The use of phrasing such as "respective" or "corresponding" may resolve this issue: "combining every N-th bit into a respective one type of the N types of packets", "combining every N-th bit into a corresponding one type of the N types of packets".

For Claim 6, it is unclear how the identities of the receiver can connect the sender terminal to the two networks. Does applicant mean "connecting the receiver with the sender terminal via the two networks"?

For Claim 8, "a last packet of at least one of the two types of packets" does not clearly indicate what is meant by "last": the last packet ever transmitted by the sender before the sender is destroyed by a power surge? If applicant means to indicate the last packet of the original message, it is suggested that applicant amend the claims accordingly.

For Claim 13, "the sender" lacks antecedent basis in the claim.

Claims 2-5, 7, 9, 10, and 14 are rejected as depending from rejected claims.

Claim Rejections – 35 USC 102

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 11 and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Shu et al. (US 2003/0115364).

For Claim 11, Shu teaches a method for transmitting electronic data comprising: preprocessing the data into at least two types of packets (see Figure 5 and paragraphs 33-36); and

sending the at least two types of packets to a receiver via at least two separate networks, the at least two types of packets separated physically, spectrally and temporally during transmission of the electronic data (see paragraphs 20 and 37: independent transmission; paragraph 98: geographic and temporal separation; paragraphs 63, 45: separate networks; see paragraph 59: wireless and optical transmission media indicate spectral separation).

For Claim 15, Shu teaches a communication system for transmitting electronic data, the system comprising:

a sending terminal for separating the electronic data into multiple packet types (see Figure 5 and paragraphs 33-36) and sending the electronic data to a receiving terminal via a plurality of separate and independent networks, each network associated with one of the multiple packet types; wherein the electronic data is sent with physical, spectral and temporal separation (see paragraphs 20 and 37: independent transmission; paragraph 98: geographic and temporal separation; paragraphs 63, 45: separate networks; see paragraph 59: wireless and optical transmission media indicate spectral separation).

For Claim 16, Shu teaches the system, wherein the multiple packet types comprise a first packet type and a second packet type (see Figure 5 and paragraphs 33-36), the plurality of separate and independent networks including a first network and a second network, wherein packets of the first packet type are sent on the first network and packets of the second type are sent on the second network (see paragraphs 20 and 37: independent transmission; paragraph 98: geographic and temporal separation; paragraphs 63, 45: separate networks; see paragraph 59: wireless and optical transmission media indicate spectral separation).

Claim Rejections – 35 USC 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
8. Claims 1, 2, 4, 8-10, 12, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shu et al. (US 2003/0115364) in view of de la Torre et al. (US 2003/0065656).

For Claim 1, Shu teaches a method for transmitting electronic data comprising: preprocessing the data, at a sender's side, into N types of packets (see Figure 5, paragraphs 33-36); and
sending the N types of packets to a receiver independently of one another, with physical, spectral, and temporal separation via N networks (see paragraphs 20 and 37: independent transmission; paragraph 98: geographic and temporal separation;

paragraphs 63, 45: separate networks; see paragraph 59: wireless and optical transmission media indicate spectral separation).

Shu does not teach combining every N-th bit into one type of the N types of packets, where N is an integer greater than or equal to two. However, de la Torre teaches combining every N-th bit into one type of the N types of packets, where N is an integer greater than or equal to two (see Figure 17 and paragraph 107: bit-wise round-robin distribution of data).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to distribute bits among the packets of Shu in a round robin manner as taught by de la Torre. The motivation for doing so would be to provide the efficiency and security benefits of de la Torre (see paragraph 5) to the data transmission method of Shu.

For Claim 2, Shu further teaches the method, characterized in that the sender preprocesses the data into two types of packets (4u, 4g) (see Figure 5 and paragraphs 33-36) which are sent to the receiver independently of one another, separated via two networks (5u, 5g) with time-shifted transmission (see paragraphs 20 and 37: independent transmission; paragraph 98: geographic and temporal separation; paragraphs 63, 45: separate networks).

For Claim 4, Shu further teaches the method characterized in that bits in an original bit sequence of an original message are combined into one type of packet and bits are combined into another type of packet.

Shu does not teach combining every N-th ($N=2$) bit into one type of the N types of packets. However, de la Torre teaches combining every N-th ($N=2$) bit into one type of the N types of packets (see Figure 17 and paragraph 107: bit-wise round-robin distribution of data).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to distribute bits among the packets of Shu in a round robin manner as taught by de la Torre. The motivation for doing so would be to provide the efficiency and security benefits of de la Torre (see paragraph 5) to the data transmission method of Shu.

For Claim 8, Shu further teaches the method, characterized in that the two types of packets can be assembled at the receiver into an original message according to a message identification transmitted within a last packet of at least one of the two types of packets (see paragraph 105: segment identifiers).

For Claim 9, Shu further teaches the method, characterized in that the temporal separation comprises a time shift between transmissions in the two networks produced by the different paths taken for each of the two types of packets (see paragraph 98).

For Claim 10, Shu further teaches the method, characterized in that the transmission in the N networks takes place over wires and/or wirelessly (see paragraph 18).

For Claim 12, Shu does not teach the method, wherein preprocessing the data into at least two types of packets comprises preprocessing the data into N types of

packets by virtue of combining every Nth bit into one type of the N types of packets, where N is a whole number greater than or equal to two.

However, de la Torre teaches preprocessing the data into N types of packets by virtue of combining every Nth bit into one type of the N types of packets, where N is a whole number greater than or equal to two (see Figure 17 and paragraph 107: bit-wise round-robin distribution of data).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to distribute bits among the packets of Shu in a round robin manner as taught by de la Torre. The motivation for doing so would be to provide the efficiency and security benefits of de la Torre (see paragraph 5) to the data transmission method of Shu.

For Claim 17, Shu does not teach the system, wherein bits of the electronic data having odd-numbered bit positions are combined into the first packet type and bits having even-numbered bit positions are combined into the second packet type.

However, de la Torre teaches the system, wherein bits of the electronic data having odd-numbered bit positions are combined into the first packet type and bits having even-numbered bit positions are combined into the second packet type (see Figure 17 and paragraph 107: bit-wise round-robin distribution of data).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to distribute bits among the packets of Shu in a round robin manner as taught by de la Torre. The motivation for doing so would be to provide the efficiency and

security benefits of de la Torre (see paragraph 5) to the data transmission system of Shu.

9. Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shu et al. (US 2003/0115364) and de la Torre et al. (US 2003/0065656) as applied to claims 1, 2, 11, and 12 above, and further in view of Preston et al. (US 2002/0032853).

For Claims 3 and 7, the references as applied above do not teach the method characterized in that the two types of packets (4u, 4g) are sent via the two separate networks (5u, 5g) containing no common nodes, or that the devices which are responsible for forwarding packets in a respective network are each connected to only one network. However, Preston et al. teach the two types of packets (4u, 4g) being sent via the two separate networks (5u, 5g) containing no common nodes, and devices which are responsible for forwarding packets in a respective network being each connected to only one network (see paragraph 46 and Figure 4).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to use the dynamic link allocation functions of Preston et al. in the network traffic camouflaging system of Shu and de la Torre. The motivation for doing so would be to achieve the application transparency advantages of the system according to Preston.

10. Claims 5, 6, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shu et al. (US 2003/0115364) and de la Torre et al. (US

2003/0065656) as applied to claims 1, 2, 11, and 12 above, and further in view of Horn (US 6192414).

For Claim 5, the references as applied above do not explicitly teach the method, characterized in that the electronic data is sent via a sender terminal, connected to the two networks, the sender terminal having two identities, one identity for each of the two networks. However, Horn teaches the method, characterized in that the electronic data is sent via a sender terminal, connected to the two networks, the sender terminal having two identities, one identity for each of the two networks (see Figures 3 and 14, column 3 lines 44-60, and column 9 lines 2-15).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to manage multiple network connections with the apparatus as shown in Horn. The motivation for doing so would be provide reliable, multiple network connections using the advantages of existing architectures (see column 3 lines 22-26).

For Claim 6, the references (Shu and de la Torre) as applied above do not explicitly teach the method characterized in that the receiver includes two corresponding identities independently connecting the sender terminal and the receiver to the two networks. However, Horn further teaches the method characterized in that the receiver includes two corresponding identities independently connecting the sender terminal and the receiver to the two networks (see Figures 3 and 14, column 3 lines 44-60, and column 9 lines 2-15).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to manage multiple network connections with the apparatus as shown in

Horn. The motivation for doing so would be provide reliable, multiple network connections using the advantages of existing architectures (see column 3 lines 22-26).

For Claim 13, the references as applied above do not teach the method wherein the at least two separate networks exist independently of one another and contain zero common nodes other than the sender and the receiver. However, Horn teaches the at least two separate networks existing independently of one another and containing zero common nodes other than the sender and the receiver (see Figure 14 and column 9 lines 2-15).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to manage multiple network connections with the apparatus as shown in Horn. The motivation for doing so would be provide reliable, multiple network connections using the advantages of existing architectures (see column 3 lines 22-26).

For Claim 14, Shu further teaches the method, wherein the at least two types of packets comprise a first type of packets and a second type of packets (see Figure 5 and paragraphs 33-36), and the at least two networks including a first network and a second network, the first type of packets being sent on the first network and the second type of packets being sent on the second network (see paragraphs 20 and 37: independent transmission; paragraph 98: geographic and temporal separation; paragraphs 63, 45: separate networks; see paragraph 59: wireless and optical transmission media indicate spectral separation).

Shu does not teach the first type of packets including odd bits of the electronic data and the second type of packets including even bits of the electronic data. However,

de la Torre teaches the first type of packets including odd bits of the electronic data and the second type of packets including even bits of the electronic data two (see Figure 17 and paragraph 107: bit-wise round-robin distribution of data).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to distribute bits among the packets of Shu in a round robin manner as taught by de la Torre. The motivation for doing so would be to provide the efficiency and security benefits of de la Torre (see paragraph 5) to the data transmission method of Shu.

Response to Arguments

The amendment filed 24 June 2009 has been entered.

The objections to claims 10, 14, and 16 are withdrawn in view of the amendments thereto. However, new objections have been made.

The rejections of claims 6 and 15-17 under 35 USC 112, second paragraph, are withdrawn in view of the amendments thereto. However, a new rejection of Claim 6 under 35 USC 112, second paragraph, has been made.

Applicant's arguments with respect to the rejection of claim 8 under 35 USC 112, second paragraph, have been fully considered, but are not persuasive. It is not a finite number of types of packets which is being transmitted, but a finite number of packets comprising a message, which packets are of two different types. Therefore "a last packet of at least one of the two types of packets" suggests that it is the type of packet which is last and presumably that packet type will never be used again, whereas "a last

packet of the original message, said last packet being of at least one of the two types of packets" indicates that it is the last packet of the message which carries the message identification and that the last packet is of one of the two packet types.

With regards to applicant's arguments regarding Shu and the teaching of temporal separation for Claims 11 and 1, it should be noted that the cited portions of Shu teach the division of a message into multiple packets (segments) which are then sent on different paths over the networks to the receiver. This spatial separation introduces the same temporal separation as in applicant's claim 9: "the temporal separation comprises a time shift between transmissions in the two networks produced by the different paths taken for each of the two types of packets." Therefore Shu does provide the teaching of temporal separation and the rejections are not withdrawn.

With respect to applicant's argument regarding Shu and the teaching of spectral separation for Claim 11, it should be noted that the cited portion of Shu, paragraph 59, is used to reach that the data may be transferred by "electronic, wireless, and optically based communications", thereby providing spectral separation for the "entity" which is, as introduced in the rejection for the same claim, divided into multiple packets and transmitted over diverse networks (see paragraphs 33-37 of Shu). Therefore Shu does provide the teaching of spectral separation and the related rejections are not withdrawn.

With respect to applicant's argument regarding claim 8 and a message identifier in "a last packet", it should be noted that the cited portion of Shu does provide this teaching. As Shu teaches placing a message identifier in each packet of the message, Shu certainly teaches placing a message identifier in a last packet. If it is applicant's

intent to claim that the message identifier is placed in the last packet of a message and no other packet of the message, applicant may amend the claim accordingly.

With respect to applicant's argument regarding claims 3 and 7, it should be noted that the cited portions of Preston show the capability of transmitting message segments over different and separate networks without common nodes; it would be obvious to use an apparatus with such a capability to carry out the method taught by Shu.

With respect to applicant's argument that the reason to combine the references for the rejections of claims 3 and 7 is superficial and not the same as applicant's motivation, it should be noted that motivation may be found in the nature of the problem to be solved and there need not be a finding that the prior art suggests that the combination claimed by the applicant is the preferred combination. The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

See MPEP Section 2143.01:

In *In re Fulton*, 391 F.3d 1195, 73 USPQ2d 1141 (Fed. Cir. 2004), the claims of a utility patent application were directed to a shoe sole with increased traction having hexagonal projections in a "facing orientation." 391 F.3d at 1196-97, 73 USPQ2d at 1142. The Board combined a design patent having hexagonal projections in a facing orientation with a utility patent having other limitations of the independent claim. 391 F.3d at 1199, 73 USPQ2d at 1144. Applicant argued that the combination was improper because (1) the prior art did not suggest having the hexagonal projections in a facing (as opposed to a "pointing") orientation was the "most desirable" configuration for the projections, and (2) the prior art "taught away" by showing desirability of the "pointing orientation." 391 F.3d at 1200-01, 73 USPQ2d at 1145-46. The court stated that "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." *Id.* The court emphasized that the proper inquiry is "whether

there is something in the prior art as a whole to suggest the *desirability*, and thus the obviousness, of making the combination,' not whether there is something in the prior art as a whole to suggest that the combination is the most desirable combination available." *Id.* In affirming the Board's obviousness rejection, the court held that the prior art as a whole suggested the desirability of the combination of shoe sole limitations claimed, thus providing a motivation to combine, which need not be supported by a finding that the prior art suggested that the combination claimed by the applicant was the preferred, or most desirable combination over the other alternatives. *Id.*

In *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 69 USPQ2d 1686 (Fed. Cir. 2004), the patent claimed underpinning a slumping building foundation using a screw anchor attached to the foundation by a metal bracket. One prior art reference taught a screw anchor with a concrete bracket, and a second prior art reference disclosed a pier anchor with a metal bracket. The court found motivation to combine the references to arrive at the claimed invention in the "nature of the problem to be solved" because each reference was directed "to precisely the same problem of underpinning slumping foundations." *Id.* at 1276, 69 USPQ2d at 1690. The court also *rejected* the notion that "an express written motivation to combine must appear in prior art references...." *Id.* at 1276, 69 USPQ2d at 1690.

Applicant's arguments with respect to the rejection of Claim 13 have been fully considered, but are moot in view of the new grounds of rejection.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Grove et al. (US 6820133) teach network separation through path diversity and connection of a single node to multiple networks (see columns 31 and 32).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CASSANDRA DECKER whose telephone number is (571) 270-3946. The examiner can normally be reached on Monday through Friday, 7:30 am to 4:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Ryman can be reached on (571) 272-3152. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cassandra Decker/
Examiner, Art Unit 2419
8/5/2009

/Daniel J. Ryman/
Supervisory Patent Examiner, Art Unit 2419